CLINICAL AND EXPERIMENTAL IMMUNOLOGY

AN OFFICIAL JOURNAL OF THE

BRITISH SOCIETY FOR IMMUNOLOGY

Editor

R. A. THOMPSON

Associate Editor

P. J. LACHMANN

Editorial board

J. F. BACH, A. BASTEN, J. R. BATCHELOR, Z. BENTWICH, R. BERNSTEIN, A. G. BIRD, J. BLACKWELL, G. F. BOTTAZZO, A. BOYLSTON, D. L. BROWN, M. R. DAHA, R. L. DAWKINS, A. M. DENMAN, U. DESSELBERGER, P. W. EWAN, J. FAHEY, M. FELDMANN, A. FERGUSON, J. S. H. GASTON, J. GORDON, M. R. HEANEY, A. HAMBLIN, L. HAMMARSTRÖM, M. HARBOE, P. HENSON, J. IVANYI, R. JEFFERIS, J. R. KALDEN, S. KATZ, M. KAZATCHKINE, T. KISHIMOTO, T. LEHNER, M. LOCKWOOD, R. N. MAINI, I. MCCONNELL, J. NEWSOM-DAVIS, G. S. PANAYI, M. PEPYS, A. J. PINCHING, T. PLATTS-MILLS, F. S. ROSEN, K. SIKORA, J. SAKLATVALA, D. I. STOTT, S. STROBEL, R. THORPE, J. L. TURK, P. VENABLES, T. A. WALDMANN, M. J. WALPORT, A. D. B. WEBSTER, A. P. WEETMAN, K. WHALEY, D. J. G. WHITE, R. WILLIAMS

VOLUME 93

pages 1–500

BLACKWELL SCIENTIFIC PUBLICATIONS

OXFORD LONDON EDINBURGH BOSTON MELBOURNE PARIS BERLIN VIENNA

1993

Published for the British Society for Immunology by
Blackwell Scientific Publications
Osney Mead, Oxford OX2 0EL, UK
25 John Street, London WC1N 2BL, UK
23 Ainslie Place, Edinburgh EH3 6AJ, UK
Suite 500, 5th Floor, 238 Main Street, Boston, MA 02142, USA
107 Barry Street, Carlton, Victoria 3053, Australia
Meinekestrasse 4, D-1000 Berlin 15, Germany
15 rue Casimir Delavigne, 75005 Paris, France
Feldgasse 13, A-1238 Vienna, Austria

Printed in Great Britain at The Alden Press, Oxford

© 1993 Blackwell Scientific Publications Ltd. Authorization to photocopy items for internal or personal use, or the internal or personal use of specific clients, is granted by Blackwell Scientific Publications Ltd. For libraries and other users registered with the Copyright Clearance Center (CCC) Transactional Reporting Service, authorization is granted provided that the base fee of $10.00 per copy is paid directly to CCC, 27 Congress Street, Salem, MA 01970, USA. This consent does not extend to other kinds of copying, such as copying for general distribution for advertising or promotional purposes, for creating new collective works or for resale. Special requests should be addressed to the Editor. 0009—9104/93/$10.00.

CLINICAL AND EXPERIMENTAL IMMUNOLOGY

CONTENTS

Vol 93 No 1 July 1993

A. O. VLADUTIU: The severe combined immunodeficient (SCID) mouse as a model for the study of autoimmune diseases 1

N. A. STAINES: Whither genetic analysis of human autoantibodies? 9

M. D. DALEY, V. MISENER, T. OLEE, P. P. CHEN & K. A. SIMINOVITCH: Genetic analysis of the variable region genes encoding a monospecific human natural anti-DNA antibody 11

M. IGARASHI, E. MATSUURA, Y. IGARASHI, H. NAGAE, Y. MATSUURA, K. ICHIKAWA, T. YASUDA, D. R. VOELKER & T. KOIKE: Expression of anticardiolipin cofactor, human β_2-glycoprotein I, by a recombinant baculovirus/insect cell system 19

B. B. SCOTT, S. SADIGH, M. STOW, R. A. K. MAGEED, E. M. ANDREW & R. N. MAINI: Molecular mechanisms resulting in pathogenic anti-mouse erythrocyte antibodies in New Zealand black mice 26

C. KRAMERS, R. M. TERMAAT, E. J. TER BORG, M. C. J. VAN BRUGGEN, C. G. M. KALLENBERG & J. H. M. BERDEN: Higher anti-heparan sulphate reactivity during systemic lupus erythematosus (SLE) disease exacerbations with renal manifestations; a long term prospective analysis 34

P. E. SPRONK, B. T. F. V. D. GUN, P. C. LIMBURG & C. G. M. KALLENBERG: B cell activation in clinically quiescent systemic lupus erythematosus (SLE) is related to immunoglobulin levels, but not to levels of anti-dsDNA, nor to concurrent T cell activation 39

H. WHITTLE, A. EGBOGA, J. TODD, G. MORGAN, M. ROLFE, S. SABALLY, A. WILKINS & T. CORRAH: Immunological responses of Gambians in relation to clinical stage of HIV-2 disease 45

F. CAVALLIN, A. TRALDI & R. ZAMBELLO: Phenotypical and functional evaluation of $CD8^+/S6F1^+$ T lymphocytes in haemophiliac individuals with HIV-1 infection 51

K. BROLIDEN, E. SIEVERS, P. A. TOVO, V. MOSCHESE, G. SCARLATTI, P. A. BROLIDEN, C. FUNDARO & P. ROSSI: Antibody-dependent cellular cytotoxicity and neutralizing activity in sera of HIV-1-infected mothers and their children 56

S. A. BISHOP, T. J. GRUFFYDD-JONES, D. A. HARBOUR & C. R. STOKES: Programmed cell death (apoptosis) as a mechanism of cell death in peripheral blood mononuclear cells from cats infected with feline immunodeficiency virus (FIV) 65

M. POURSHAFIE, Q. AYUB & W. W. BARROW: Comparative effects of *Mycobacterium avium* glycopeptidolipid and lipopeptide fragment on the function and ultrastructure of mononuclear cells 72

M. YAMADA, R. UCHIKAWA, M. NAKAZAWA, M. ODA & N. ARIZONO: Dissociation of specific and total IgE antibody responses following repeated low-level infections with *Nippostrongylus brasiliensis* in rats 80

M. R. GRAUERT, M. HOUDAYER & M. HONTEBEYRIE-JOSKOWCIZ: *Trypanosoma cruzi* infection enhances polyreactive antibody response in an acute case of human Chagas' disease 85

A.-M. GERDES, M. HØRDER & V. BONNEVIE-NIELSEN: Increased IFN-α-induced sensitivity but reduced reactivity of 2′,5′-oligoadenylate synthetase (2,5AS) in trisomy 21 blood lymphocytes 93

H. R. DALTON, M. C. DIPAOLO, G. K. SACHDEV, B. CROTTY, P. HOANG & D. P. JEWELL: Human colonic intraepithelial lymphocytes from patients with inflammatory bowel disease fail to down-regulate proliferative responses of primed allogeneic peripheral blood mononuclear cells after rechallenge with antigens 97

J. J. GOMEZ-REINO, M. SANDBERG, P. E. CARREIRA & E. VUORIO: Expression of types I, III and IV collagen genes in fibrotic skin and nerve lesions of toxic oil syndrome patients 103

B. WOJCIAK & J. F. CROSSAN: The accumulation of inflammatory cells in synovial sheath and epitenon during adhesion formation in healing rat flexor tendons 108

L. SCHANDENÉ, B. NAMIAS, A. CRUSIAUX, M. LYBIN, R. DEVOS, T. VELU, P. CAPEL, R. BELLENS & M. GOLDMAN: IL-5 in post-traumatic eosinophilic pleural effusion 115

M. VILLACRES-ERIKSSON, M. BERGSTRÖM-MOLLAOGLU, H. KÅBERG, K. LÖVGREN & B. MOREIN: The induction of cell-associated and secreted IL-1 by iscoms, matrix or micelles in murine splenic cells 120

I. T. MANYONDA, R. S. PEREIRA, J. M. PEARCE & C. E. M. SHARROCK: Limiting dilution analysis of the allo-MHC anti-paternal cytotoxic T cell response I: normal primigravid and multiparous pregnancies 126

I. T. MANYONDA, R. S. PEREIRA, J. M. PEARCE & C. E. M. SHARROCK: Limiting dilution analysis of the allo-MHC anti-paternal cytotoxic T cell response II: recurrent spontaneous abortion and the effect of immunotherapy 132

Vol 93 No 2 August 1993

N. R. LING: Pitfalls in the measurement of soluble forms of cell surface receptors 139

B. G. BRENNER, C. GRYLLIS, M. GORNITSKY & M. A. WAINBERG: Changes in natural immunity during the course of HIV-1 infection 142

T. MATSUMOTO, T. MIIKE, R. P. NELSON, W. L. TRUDEAU, R. F. LOCKEY & J. YODOI: Elevated serum levels of IL-8 in patients with HIV infection 149

V. DANIEL, C. SÜSAL, R. WEIMER, R. ZIMMERMANN, A.

HUTH-KÜHNE & G. OPELZ: Association of T cell and macrophage dysfunction with surface gp120–immunoglobulin–complement complexes in HIV-infected patients 152
M. HAZLEWOOD, R. NUSRAT, D. S. KUMARARATNE, M. GOODALL, C. RAYKUNDALIA, DA GONG WANG, H. J. JOYCE, A. MILFORD-WARD, M. FORTE & A. PAHOR: The acquisition of anti-pneumococcal capsular polysaccharide *Haemophilus influenzae* type b and tetanus toxoid antibodies, with age, in the UK 157
S. S. PIERANGELI & G. SONNENFELD: Treatment of murine macrophages with murine interferon-gamma and tumour necrosis factor-alpha enhances uptake and intracellular killing of *Pseudomonas aeruginosa* 165
J. C. MACKALL, G. H. BAI, D. A. ROUSE, G. R. G. ARMOA, F. CHUIDIAN, J. NAIR & S. L. MORRIS: A comparison of the T cell delayed-type hypersensitivity epitopes of the 19-kD antigens from *Mycobacterium tuberculosis* and *Myco. intracellulare* using overlapping synthetic peptides 172
B. M. TWOMEY, S. MCCALLUM, D. A. ISENBERG & D. S. LATCHMAN: Elevation of heat shock protein synthesis and hsp gene transcription during monocyte to macrophage differentiation of U937 cells 178
S. PICOT, F. PEYRON, P. DELORON, C. BOUDIN, B. CHUMPITAZI, G. BARBE, J. P. VUILLEZ, A. DONADILLE & P. AMBROISE-THOMAS: Ring-infected erythrocyte surface antigen (Pf/155RESA) induces tumour necrosis factor-alpha production 184
F. FIGUEIREDO, L. M. C. ALVES & C. L. SILVA: Tumour necrosis factor production *in vivo* and *in vitro* in response to *Paracoccidioides brasiliensis* and the cell wall fractions thereof 189
H. P. HUEMER, C. LARCHER, W. M. PRODINGER, A. L. PETZER, M. MITTERER & N. FALSER: Determination of soluble CD21 as a parameter of B cell activation 195
K. MORKAWA, F. OSEKO & S. MORIKAWA: Immunosuppressive property of bromocriptine on human B lymphocyte function *in vitro* 200
A. MATSUKAWA, S. OHKAWARA, T. MAEDA, K. TAKAGI & M. YOSHINAGA: Production of IL-1 and IL-1 receptor antagonist and the pathological significance in lipopolysaccharide-induced arthritis in rabbits 206
M. CALLAGHAN, A. WHELAN, C. FEIGHERY & B. BRESNIHAN: IL-2 enhances polyclonal IgM but not IgM-rheumatoid factor synthesis by activated human peripheral blood B cells 212
E. M. Ó NUALLÁIN, P. PURI & D. J. REEN: Early induction of IL-1 receptor antagonist (IL-1Ra) in infants and children undergoing surgery 218
S. HOEFAKKER, E. H. M. VAN'T ERVE, C. DEEN, A. J. M. VAN DEN EERTWEGH, W. J. A. BOERSMA, W. R. F. NOTTEN & E. CLAASSEN: Immunohistochemical detection of co-localizing cytokine and antibody producing cells in the extrafollicular area of human palatine tonsils 223
K. YONEDA, T. OSAKI, T. YAMAMOTO & E. UETA: Effects of tumour necrosis factor-alpha (TNF-α), IL-1β and monocytes on lymphokine-activated killer (LAK) induction from natural killer (NK) cells and T lymphocytes 229
G. STURFELT, H. JONSSON, G. HELLMER & A. G. SJÖHOLM: Clustering of neutrophil leucocytes in serum: possible role of C1q-containing immune complexes 237
N.-H. CHOI-MIURA, T. SAKAMOTO, S. OHTAKI, H. NAKAMURA, S. ISHIZAWA, Y. TAKAGI, K. GOMI & M. TOMITA: Elevated complement activities of sera from patients with high density lipoprotein deficiency (Tangier disease): the presence of normal level of clusterin and the possible implication in the atherosclerosis 242
X. CHEN & B-L. MA: Trichosanthin, an initiator of the alternative complement activation pathway 248
P. TERNESS, U. MARX, G. SANDILANDS, D. ROELCKE, M. WELSCHOF & G. OPELZ: Suppression of anti-erythrocyte autoantibody-producing B cells by a physiological IgG-anti-F(ab′)$_2$ antibody and escape from suppression by tumour transformation; a model relevant for the pathogenesis of autoimmune haemolytic anaemia 253
J. B. MARRIOTT & D. B. G. OLIVEIRA: Antimitochondrial autoantibodies in anti-glomerular basement membrane disease 259
Z. KRA-OZ, M. LORBER, Y. SHOENFELD & Y. SCHARFF: Inhibitor(s) of natural anti-cardiolipin autoantibodies 265
S. S. PIERANGELI & E. N. HARRIS: Induction of phospholipid-binding antibodies in mice and rabbits by immunization with human β_2 glycoprotein I or anticardiolipin antibodies alone 269
V. BURKART & H. KOLB: Protection of islet cells from inflammatory cell death *in vitro* 273
E. WEBER, H. P. LEHMANN, A. G. BECK-SICKINGER, E. J. WAWRZYNCZAK, R. WAIBEL, G. FOLKERS & R. A. STAHEL: Antibodies to the protein core of the small cell lung cancer workshop antigen cluster-w4 and to the leucocyte workshop antigen CD24 recognize the same short protein sequence leucine-alanine-proline 279
M. MARTIN, J. J. CENTELLES, J. HUGUET, F. ECHEVARNE, D. COLOMER, J. L. VIVES-CORRONS & R. FRANCO: Surface expression of adenosine deaminase in mitogen-stimulated lymphocytes 286
E. M. E. VERDEGAAL, H. BEEKHUIZEN, I. BLOKLAND & R. VAN FURTH: Increased adhesion of human monocytes to IL-4-stimulated human venous endothelial cells via CD11/CD18, and very late antigen-4 (VLA-4)/vascular cell adhesion molecule-1 (VCAM-1)-dependent mechanisms 292

Vol 93 No 3 September 1993

R. A. THOMPSON: Clinical immunology: is it clinical science or medical practice? 299
M. JONKER, W. SLINGERLAND, G. TREACY, P. VAN EERD, K. Y. PAK, E. WILSON, S. TAM, K. BAKKER, A. F. LOBUGLIO, P. RIEBER, G. RIETHMULLER, P. E. DADDONA & J. IULIUCCI: *In vivo* treatment with a monoclonal chimeric anti-CD4 antibody results in prolonged depletion of circulating CD4$^+$ cells in chimpanzees 301
A. TSUJI, J. WANG, K. H. STENZEL & A. NOVOGRODSKY: Immune stimulatory and anti-tumour properties of haemin 308
P. APPLEBY, G. TELFORD & G. B. NAYLOR: Suppression of autoimmune disease in NZB/W F$_1$ mice by treatment with the novel immunomodulator BTS 63155 313
N. P. M. BAKKER, N. VAN BESOUW, R. GROENESTEIN, M. JONKER & L. A. 'T HART: The anti-arthritic and immuno-

suppressive effects of cyclosporin A on collagen-induced arthritis in the rhesus monkey 318
J. M. WANG, M. DENIS, M. FOURNIER & M. LAVIOLETTE: Cyclosporin A increases the pulmonary eosinophilia induced by inhaled *Aspergillus* antigen in mice 323
D. CHARGELEGUE, C. M. O'TOOLE & B. T. COLVIN: A longitudinal study of the IgG antibody response to HIV-1 p17 *gag* protein in HIV-1$^+$ patients with haemophilia: titre and avidity 331
M. MAHALINGAM, M. PEAKMAN, E. T. DAVIES, A. POZNIAK, T. J. MCMANUS & D. VERGANI: T cell activation and disease severity in HIV infection 337
S. PALMER & A. S. HAMBLIN: Increased CD11/CD18 expression on the peripheral blood leucocytes of patients with HIV disease: relationship to disease severity 344
A. KALINKOVICH, G. LIVSHITS, H. ENGELMANN, N. HARPAZ, R. BURSTEIN, M. KAMINSKY, D. WALLACH & Z. BENTWICH: Soluble tumour necrosis factor receptors (sTNF-R) and HIV infection: correlation to CD8$^+$ lymphocytes 350
M. D. GRANT, F. M. SMAILL & K. L. ROSENTHAL: Lysis of CD4$^+$ lymphocytes by non-HLA-restricted cytotoxic T lymphocytes from HIV-infected individuals 356
K. S. SLOBOD & J. E. ALLAN: Parainfluenza type 1 virus-infected cells are killed by both CD8$^+$ and CD4$^+$ cytotoxic T cell precursors 363
O. ROTT, S. HERZOG & E. CASH: T cell memory specific for self and non-self antigens in rats persistently infected with Borna disease virus 370
Y. PANNEKOEK, I. G. A. SCHUURMAN, J. DANKERT & J. P. M. VAN PUTTEN: Immunogenicity of the meningococcal stress protein MSP63 during natural infection 377
R. PERRAUT, A. R. LUSSOW, S. GAVOILLE, O. GARRAUD, H. MATILE, C. TOUGNE, J. VAN EMBDEN, R. VAN DER ZEE, P.-H. LAMBERT, J. GYSIN & G. DEL GIUDICE: Successful primate immunization with peptides conjugated to purified protein derivative or mycobacterial heat shock proteins in the absence of adjuvants 382
G. YANNI, A. WHELAN, C. FEIGHERY, W. QUINLAN, J. SYMONS, G. DUFF & B. BRESNIHAN: Contrasting levels of *in vitro* cytokine production by rheumatoid synovial tissues demonstrating different patterns of mononuclear cell infiltration 387
J. MA, N. KING, S.-L. CHEN, R. PENNY & S. N. BREIT: Antibody penetration of viable human cells; anti-RNP antibodies binding to RNP antigen expressed on cell surface, which may mediate the antibody internalization 396
K. M. DOLMAN, C. A. STEGEMAN, B. A. VAN DE WIEL, C. E. HACK, A. E. G. KR. VON DEM BORNE, C. G. M. KALLENBERG & R. GOLDSCHMEDING: Relevance of classic anti-neutrophil cytoplasmic autoantibody (C-ANCA)-mediated inhibition of proteinase 3-α_1-antitrypsin complexation to disease activity in Wegener's granulomatosis 405
S. SACKS, W. ZHOU, R. D. CAMPBELL & J. MARTIN: C3 and C4 gene expression and interferon-gamma-mediated regulation in human glomerular mesangial cells 411
K. A. BERNSTEIN, D. BOLSHOUN & J. B. LEFKOWITH: Serum glomerular binding activity is highly correlated with renal disease in MRL/*lpr* mice 418
W. ZHANG, P. W. EWAN & P. J. LACHMANN: The paraproteins in systemic capillary leak syndrome 424
Y. IWATANI, Y. HIDAKA, F. MATSUZUKA, K. KUMA & N. AMINO: Intrathyroidal lymphocyte subsets, including unusual CD4$^+$CD8$^+$ cells and CD3^{lo}TCR$\alpha\beta^{lo/-}$ CD4$^-$CD8$^-$ cells, in autoimmune thyroid disease 430
H. STÖGER, M. WILDERS-TRUSCHNIG, H. SAMONIGG, M. SCHMID, T. BAUERNHOFER, A. TIRAN, M. TAS & H. A. DREXHAGE: The presence of immunosuppressive 'p15E-like' factors in the serum and urine of patients suffering from malign and benign breast tumours 442
J. KITAYAMA, Y. ATOMI, H. NAGAWA, A. KURODA, T. MUTOH, M. MINAMI & T. JUJI: Functional analysis of TCR $\gamma\delta^+$ T cells in tumour-infiltrating lymphocytes (TIL) of human pancreatic cancer 442
X.-M. ZHAO, W. H. FRIST, T.-K. YEOH & G. G. MILLER: Expression of cytokine genes in human cardiac allografts: correlation of IL-6 and transforming growth factor-beta (TGF-β) with histological rejection 448
S. NOMURA, Y. MIYAZAKI, T. MIYAKE, K. YAMAGUCHI, H. KIDO, T. KAWAKATSU, T. FUKUROI, H. KAGAWA, M. SUZUKI, M. YANABU & T. KOKAWA: IgG inhibits the increase of platelet-associated C_3 stimulated by anti-platelet antibodies 452
E. J. M. AHSMANN, R. J. BENSCHOP, T. D. DE GRUYL, J. A. J. FABER, H. M. LOKHORST & A. C. BLOEM: A novel flow cytometric assay for the quantification of adhesion of subsets within a heterogeneous cell population; analysis of lymphocyte function-associated antigen-1 (LFA-1)-mediated binding of bone marrow-derived primary tumour cells of patients with multiple myeloma 456
J. G. MURISON, S. QUARATINO, M. KAHAN, A. VERHOEF & M. LONDEI: Definition of unique traits of human CD4$^-$CD8$^-$ $\alpha\beta$ T cells 464
S. PANZER, M. MADDEN & K. MATSUKI: Interaction of IL-1β, IL-6 and tumour necrosis factor-alpha (TNF-α) in human T cells activated by murine antigens 471
H. BESSLER, L. SIROTA, I. NOTTI, T. MILO & M. DJALDETTI: IL-2 receptor gene expression and IL-2 production by human preterm newborns' cells 479
A WHO/IUIS/IAACI REPORT: Clinical immunology: guidelines for its organization, training and certification; relationships with allergology and medical disciplines 484